Vol. 81, pp. 251-256

30 August 1968

PROCEEDINGS OF THE

BIOLOGICAL SOCIETY OF WASHINGTON

ISOODON DESMAREST, 1817, RATHER THAN THYLACIS ILLIGER, 1811, AS THE VALID GENERIC NAME OF THE SHORT-NOSED BANDICOOTS (MARSUPIALIA: PERAMELIDAE)

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In recent years, two generic names have been widely used for the three or more species of short-nosed bandicoots, which inhabit large parts of Australia and southeastern New Guinea. The older name, *Thylacis* Illiger, 1811, has been used, for example, by Simpson (1945), Laurie and Hill (1954), Marlow (1958), and Ziegler and Lidicker (1968); the later name, *Isoodon* Desmarest, 1817, by Troughton (1947), Tate (1948), Mackerras and Mackerras (1960), and Marlow (1962).

Since differing interpretations of the historical record continue to prolong nomenclatural instability in this group of marsupials, we have taken a fresh look at the entire problem, and have examined essentially everything written on these animals up to 1888. It was in this year that Oldfield Thomas formally designated *Perameles nasuta* Geoffroy, 1804, as the type-species of *Perameles*, and *Didelphis obesula* Shaw and Nodder, 1797, as the type-species of *Thylacis*, thus precipitating the current confusion. As a result of our research, we have become convinced that *Isoodon* Desmarest, 1817, rather than *Thylacis* Illiger, 1811, is the valid generic name of the short-nosed bandicoots. To record the evidence supporting this conclusion, we must review briefly the major events in the nomenclatural history of the three nominal genera concerned.

Discussion: The first bandicoot known to science was described as Didelphis obesula by Shaw and Nodder (1797).

The nominal genus *Perameles* was erected by Geoffroy (1803), who included therein two recognizable species, but did not mention either by a specific name. In these circumstances, *Perameles* Geoffroy, 1803, is to be regarded as a nominal genus without originally included nominal species (see Art. 69 a i).²

Geoffroy (1804) redescribed the genus Perameles, including therein Didelphis obesula Shaw and a new species described by Geoffroy, in the same paper, as Perameles nasuta were the same two species included, but not by name, in Perameles Geoffroy, 1803). These two nominal species are to be regarded as those first subsequently referred to the nominal genus Perameles Geoffroy, 1803 (see Art. 69 a ii). Geoffroy (1804) did not designate or indicate the type-species of the nominal genus Perameles. Therefore, any zoologist could subsequently designate as the type-species either one of the two nominal species first subsequently referred to this genus (see Art. 69 a). The earliest subsequent designation that we have found was that of Lesson (1828:197), who stated unequivocally ". . . Perameles, avait pour type le Perameles nasuta, Geoff., . . ." This type-designation fixed the generic name Perameles upon the long-nosed bandicoots, a conclusion affirmed by subsequent authors, both contemporary with Lesson (e.g. Desmerest, 1849:577) and modern (e.g. Iredale and Troughton, 1934:18).

The nominal genus *Thylacis* was erected by Illiger, 1811, who cited as generic synonyms "*Perameles* Geoff. Tiedem." [= *Perameles* Geoffroy, 1803, and *Perameles* Tiedemann, 1808], and who included the same two species, *Didelphys* [sic] *obesula* Shaw and *Perameles nasuta* Geoffroy.

Demonstrably, Illiger proposed the generic name *Thylacis* as a replacement name for *Perameles* Geoffroy, 1803, and *Perameles* Tiedemann, 1808, which he regarded as violating

 $^{^{1}}$ Date from Sherborn (1895:376), and also independently derived from a study of the several dated plates in the work.

² The abbreviation "Art." is used in this paper to designate an Article of The International Code of Zoological Nomenclature (1964).

the rules of the Linnaean botanical philosophy. Illiger (1811: xvi) stated, "Nomina generica, quae rejeci, secundum regulas codicis nostri, philosophiae nempe botanicae Linnaeanae, quibus contradicunt, digesta jam enumerabo." We translate this, "I shall now enumerate separately those generic names that I have rejected, [which] according to the rules of our code, obviously violate those of the Linnaean botanical philosophy." This statement is followed by an enumeration of 15 categories of rejected names. One such category (page xvii) reads as follows: "N[omen] g[enericum] cui syllaba una vel altera praeponitur (aut aufertur) ut aliud genus, quam antea, significat, excludendum est." We translate this, "A generic name to which one syllable or another is prefixed (or [from which it is] removed) so that it signifies another genus than [it did] formerly, is to be excluded." In this category Illiger listed Perameles (which he apparently considered objectionable because it represented the generic name Meles with syllables prefixed)—expressly demonstrating his purpose of substituting Thylacis as a replacement name. Further evidence for his intent is provided by the fact that Illiger's description of Thylacis matches in all significant details Geoffroy's original description of Perameles.

If a zoologist proposes a new generic name expressly as a replacement for a prior name, both nominal genera must have the same type-species, and (subject to the requirement that the type-species must be a species eligible for fixation as the type of the earlier nominal genus), type-fixation for either applies also to the other, despite any statement to the contrary (see Art. 67 i). Thus when Lesson (1828:197) designated *Perameles nasuta* Geoffroy as the type-species of the nominal genus *Perameles* Geoffroy, 1803, that type-fixation applied also to the nominal genus *Thylacis* Illiger, 1811, which had been proposed expressly as a replacement for *Perameles* Geoffroy, 1803.³

The type-species of Thylacis Illiger, 1811, having once been

³ This applies also to Oken's (1816) invalid name *Thylax*, which was proposed as still another alternative for *Perameles*. Oken (1816) was rejected for nomenclatural purposes by Opinion 417 of the International Commission on Zoological Nomenclature.

fixed by Lesson (1828:197) in conformity with the provisions of the Code, was not subject to change (see Art. 61). The action of Oldfield Thomas (1888:227) in designating "P. obesula" as type of Thylacis Illiger, 1811, was therefore void. Thylacis Illiger, 1811, remains a junior objective synonym of Perameles Geoffroy, 1803 (see Art. 61 b). This was the conclusion reached by Mackerras and Mackerras (1960), who, however, did not state their supporting evidence or reasoning, and therefore left the matter open to question.

Didelphis obesula Shaw and Nodder, 1797, is currently regarded as generically distinct both from Didelphis Linnaeus, 1758, and from Perameles Geoffroy, 1803. The oldest generic name with which it may properly be combined is Isoodon Desmarest, 1817.

Thus the three nominal genera concerned are the following: *Perameles* Geoffroy, 1803

Without originally included nominal species. (Art. 69 a i)

First subsequently referred species (through Geoffroy, 1804): Didelphis obesula Shaw and Nodder, 1797, and Perameles nasuta Geoffroy, 1804. (Art. 69 a ii)

Type-species, by subsequent designation of Lesson (1828: 197): Perameles nasuta Geoffroy, 1804. (Art. 69 a)

Thylacis Illiger, 1811

Proposed expressly as a replacement name for *Perameles* Geoffroy, 1803.

Originally included species: *Didelphys* [sic] *obesula* Shaw and Nodder, 1797, and *Perameles nasuta* Geoffroy, 1804.

Type-species, through designation by Lesson (1828:197) of the type-species of *Perameles* Geoffroy, 1803: *Perameles* nasuta Geoffroy, 1804. (Art. 67 i)

Isoodon Desmarest, 1817

Only originally included species, and therefore type-species by monotypy: *Didelphis obesula* Shaw and Nodder, 1797. (Art. 68 c)

Acknowledgments: We are indebted to Lillian J. Dempster, of the California Academy of Sciences, and to Basil Marlow, of the Australian Museum, for assistance with the literature,

and to Alan C. Ziegler, now with the Bishop Museum, Honolulu, for technical assistance with this project.

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